

## Common Injuries

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### Foot

Obviously, your feet take the brunt of the punishment during running. Each one pounds the ground some 800 times per mile. Any structural flaws in your feet, or any slight imbalances in your stride, can result over time in an ache here or there. Shoes that fit properly and are well matched to your foot structure are crucial, and many of the injuries listed here are the result of simply wearing the wrong shoe.

Condition	Description	Likely Causes	Remedy
Blisters		Blisters are caused by rubbing and irritation of the skin. Shoes don't fit or not broken in.	If the blister isn't causing any pain, leave it alone. But if it's interfering with your running, you should feel free to operate as long as you're careful to avoid infection by using an antiseptic. Carefully clean the area using an antiseptic. Let the blister dry, without putting on any ointment, and cover the blister with gauze or a Band-Aid. Problem fixed. 1. First, make sure that your shoes fit properly. 2. Try blister-proof socks. 3. Lubricate your foot with vaseline or talcum powder before runs. 4. Cover blister with duct tape, or moleskin.
Corns	Hard, painful lumps on the skin.	Constant rubbing and pressure from shoes that are too tight.	Get shoes that fit better. Very likely, the shoes you have are either too short, too narrow or both. Take some of the pressure off the corn by putting a doughnut pad on it. This is a little pad with a hole in it that eases friction when fitted over the corn. With the right shoes and the pressure relieved, the corn will disappear in a few weeks. You can speed this process by giving the corn a few strokes with an emery board a few times a week.
Black toenail	Toenail is black. It may be painful.	Repeated pressure and impact on your toenail. It could be from running downhill, when your shoe stops short and your toe keeps slamming into the end of the shoe. Or the toebox of your shoe could be too large, and your toe keeps banging against the top (over long distances the cumulative effect of this can be pretty tough on the nail). Result is bleeding under the nail.	The blood must be released to relieve the pressure. See a doctor to take care of it. If you don't take care of it in the first couple of weeks, the nail will probably start to come off, and several weeks later it will ultimately drop off. Not to worry, while this is not a particularly attractive process, it's not painful or unhealthy either.
Thick toenail	The nail is noticeably thicker than normal --perhaps up to 1/2-inch or 3/4 inch thick. The pressure of the shoe probably makes the nail quite painful.	Result of repeated trauma to the nail -- injury after injury. Maybe it's from constant pressure and impact within your running shoes, or maybe you have dropped stuff on your toe several times.	File the top of the nail, using an emery board to smooth it down. You'll likely find that the nail will grow back and thicken again, and you may have to file it again. NOTE: If your nail is also discolored and mottled with yellow and white, this may be fungus nail instead of a mere thick toenail. See a podiatrist who can apply a fungicide.

Condition	Description	Likely Causes	Remedy
Bunions	A bunion is the enlarged bone connecting to the big toe that sticks out at the side. Having a bunion is not necessarily a problem unless it begins to be tender and painful.	Bunions may become enlarged if too much weight or shoe pressure is applied to them. If this has happened to you, your big toe is probably angled in and overlaps your second toe, causing a problem of weight distribution. As a result, extra weight is getting put on the ball of your big toe, possibly aggravated by the pounding of running. The ball has responded by growing larger in an attempt to handle the weight better.	First, be sure that you are not wearing shoes that are too tight. Second, try to take pressure off the bunion. Your local drugstore probably sells bunion pads which will cover the bunion and pad the area around it to help take the pressure off the bunion itself. (You can also make your own out of foam rubber. Try a 1/4"-thick piece, and cut a hole to match the size and shape of the bunion). Finally, an arch support (available at most drug stores and running stores) may help to take some of the pressure off of the bunion. If you still have trouble, visit a podiatrist.
Soreness under ball of big toe	Tiny bones called sesamoids are located under the ball of your big toe (where the toe connects to your foot). These bones sometimes bruise -- it's a hassle, but it's also a warning system; they start aching before you damage the bones of your big toe. To see if you've bruised them, press hard on the head of your big toe with your thumb. If you're howling in pain you've bruised, or broken your sesamoids.	Increased mileage, maybe new hillwork or speedwork. Running too much on the balls of your feet. Also, it is possible that your running surface is responsible -- too much hard pavement. A final possibility is that you are doing nothing wrong at all, but you may have been betrayed by your own bone structure (i.e., you have bony feet without much fat padding).	Ice your foot, putting it on ice for ten minutes, off for ten minutes, and repeat. Do this often, maybe four times per day. You also have to treat the root cause and stop pounding the balls of your feet into pulp. Reduce hillwork and speedwork, and also take a look at your stride. Your heel should hit the ground first, rolling through the middle of your foot and then springing off from your toes. You should not be landing on the balls of your feet. The problem can further be avoided in the future by padding around the ball of your foot to take pressure off of it. Get a piece of felt or foam rubber (maybe try using a Dr. Scholl's heel pad). It should be 1/4" thick and about 2" square. Cut a shallow "U" out of the pad so that it fits snugly behind (not over) the ball of your foot. Behind means on the heel side, not the toe side. The pad should fit right behind the painful area. You'll know you've got it right when you try it out and walk around -- the pressure will be off the bone, and the pain will be far reduced. Tape the padding to your foot and wear it in your daytime shoes as well as your running shoes. You should be able to hit the road immediately, and the pain will likely disappear in about two weeks. If it does not, you may need custom orthotics. See a podiatrist, preferably one who is also a runner.
Hammer Toes	Your toes, or maybe just one of them, will not stay straight. With effort you might be able to get your toes to straighten, but it won't stay that way. The top of the toes hurt when you run, probably from corns that have formed there (you may have also formed corns on the tips of the hammer toes). Any toe except the big toe can be a hammer toe.	Your hammer toes are almost certainly caused by shoes that are too short. After extended use of ill-fitting shoes, the tendons on the bottom of your toes have actually shortened and now they won't stretch out again.	Wear shoes that are looser in the toes. If you do have corns on the tops of your toes, wrap lamb's wool around them; you can find lamb's wool in the footcare section of your local drugstore. It lasts for three or four days of straight use. If you have a corn on the tips of your toes, try putting some padding in the arch beneath the toes to lift them up. This should stop the tips of your toes from pounding into the sole of your shoe.
Pain under your three smallest toes	Pain under your three small toes. If you press with your fingers between the toes and balls of your feet, you feel pain.	Too much pounding. You're probably coming down too hard on this area of your foot when you run. As a result bursitis may have developed, with your foot building a cushion called a bursa to protect the area. The pain you feel is the bursa getting irritated.	Take the pressure off this area with some foot pads. You can probably find some metatarsal pads in the footcare section of your drug store, but a piece of felt or foam rubber will do the trick, too -- about 1/4" thick, two or three inches long. The idea is to put padding behind the balls of your feet so you won't pound them so hard. Bend your toes back and press until you find the spots that hurt; tape the padding to the area just behind (that's on the heel side of the pain, not the toe side). This should take care of the symptoms, but the cause itself is probably due to an imbalance in your foot. Visit a podiatrist, preferably a runner, to see if orthotics may help.

Condition	Description	Likely Causes	Remedy
Neuromas (burning between toes)	A neuroma is a bundle of nerve endings whose covering has become inflamed. Probably between the third and fourth toes, you feel a burning sensation, maybe more like an electric tingling or a shooting pain, possibly with some numbness. There is no swelling, no bumps. The pain may come on at odd times, even when you are not being particularly active.	This problem is apparently fairly common for people with a "loose foot," where there is too much movement between the metatarsals, the bones that connect to the toes.	Ice the foot for ten minutes, then ten minutes off, and repeat five times to bring down the inflammation. Take pressure off of the neuroma by putting some padding right behind where the toes meet your foot. Bend your toes back and press on the bottom of your foot to find the most painful spot. Put the padding right behind that (that's on the heel side of the pain, not the toe side). Use some foam rubber or felt, about 1/4" thick. You will probably always have to use this padding to run since the source of the problem is in your foot structure. Tape the padding to your foot, or glue them into your shoes. Nerve bundles won't hurt so long as you're wearing the padding. If you continue to have pain, it's time to see a podiatrist. Hopefully, she can fit you with appropriate padding, but surgery may be a necessity in the long run to remove the neuroma. (As surgery goes, this is supposedly not terribly disabling; most can start running again two or three weeks afterward.)
Metatarsal stress fracture	Pain in one of the long thin bones that run along the top of your foot and attach to your toes (the metatarsals). There may be a little redness or swelling, and if you touch this area the pain will knock you over. Press along the shaft of the bone toward the outside and then toward the inside, and you should feel a stabbing pain.	The metatarsals can be broken or bruised under the stress of running, particularly for long distances. You're running harder and longer than your feet are able to take.	This is not a do-it-yourselfer. Stop running and see a podiatrist or an orthopedist immediately. Under a doctor's care, you should be back to running in about six weeks.
Pain on top of the foot	If your symptoms do not match those listed above for a metatarsal stress fracture, the pain is probably caused by either a bone spur or simply shoes that are too tight.	A bone spur is an enlarged bone; you'll see it as a bump on top of the foot. The bone has probably grown as a result of pressure being applied to it.	Try wearing larger shoes and don't tie your shoe laces quite so tight. (Remember when buying shoes that your feet swell when you run, especially over long distances). In the case of a bone spur, try taking some of the pressure off of the bone. Cut a piece of foam rubber (about 1/4" thick) to make a doughnut-shaped pad that fits over the bone spur. Either put it on before running or glue it to the tongue of your running shoe.

Condition	Description	Likely Causes	Remedy
Plantar fasciitis (pronounced fa-shee-eye-tiss)	This is among the most common of foot injuries and is signaled by pain on the front of the heel or all along the arch. You probably have a lot of pain when you first get out of bed -- it's probably murder just to walk out of your bedroom. Ditto on standing up after a long time of being seated. The pain may range anywhere from a vague pull along the arch to the impression that your arch is ripping in half (don't worry, it's not actually doing that). To make sure it's plantar fasciitis, as opposed to a heel spur (see below), press your thumb up hard on the middle of your heel. If you feel pain, it's plantar fasciitis.	Fascia is the stuff your body uses either to separate muscle groups or to connect separate parts. In your foot, fascia forms the arch, connecting your heel bone to the balls of your feet. In the ideal foot with the ideal stride, your weight during your stride rolls efficiently from your heel, through your arch, and off of the ball of your foot. The arch flattens a little bit to absorb your weight and then springs back. Of course for most of us, it's a bit much to ask for both an ideal foot AND an ideal stride. Plantar fasciitis is the all too common result of your weight moving improperly through your arch so that it is overstretched. In more extreme cases, the arch loses its flexibility altogether so that it no longer springs back (in which case you have a fallen arch, see flat feet below). The injury is aggravated, like most injuries, by running too much. It also doesn't help much to run on hard surfaces or run on the balls of your feet (for example, when running hills or doing trackwork).	First, ease off on the miles and cut out the hills and speedwork. When you do run, make sure your calves and hamstrings are well stretched. Plantar fasciitis is essentially an inflammation of the fascia. Give it ice immediately after running -- ten minutes on ice, ten minutes off, and repeat. Take anti-inflammatories to reduce the swelling. For that early-morning pain, avoid getting out of bed barefoot. Put on some thick socks or slippers first. To get at the source of the problem, you have to give your arch some help and support. Try wearing an arch strapping. This will add support to your arch. If the strapping does not provide enough relief, pick up some arch supports. You should be able to find them (probably by Dr. Scholls) at a drug store. They raise the arch and shift burden off the heel. By wearing these you also give the fascia a little slack -- the arch doesn't have to stretch as far. If the strapping and the arch supports together are not enough, try adding heel pads. You can buy these or just use make-up sponges (you're looking for 1/2-inch sponge rubber). Also, tight calves can add strain to the fascia. Spend some extra time stretching your calves with wall pushups. When walking up stairs, put your whole foot on the stair. This kind of home treatment is usually pretty successful for plantar fasciitis. Give it a try, it's a lot cheaper than orthotics. But if after two weeks you still have pain, see a podiatrist who treats athletes (and who is preferably a runner). Orthotics may be necessary. If so, they should solve the problem for good.
Heel spurs	The symptoms of heel spurs are nearly identical to those for plantar fasciitis (above). There is pain in the front of the heel and possibly in the arch. Pain probably seems particularly acute when taking your first steps of the day or walking after a long period of sitting down. When you have a heel spur, unlike with plantar fasciitis, you will feel pain when you press the front of the heel, at the intersection of the heel and the arch, pressing up and backward toward the heel. This is where the heel spur has formed - it's a pointy extension of the heel bone.	As with plantar fasciitis, you may have strained the fascia that form the arch of your foot. In doing so, some of the fascia may have actually been yanked off of the heel bone, leaving some blood behind. Over time these little droplets, sitting on your heel bone, calcified and actually formed an extra little piece of bone, the heel spur. The pain you feel is not the spur itself (that's bone), but the flesh and fascia around it which are now taking an extra pounding from the new arrival in your skeletal neighborhood.	There are some things you can do to ease the discomfort and possibly even cure the problem. Keep in mind, though, that home treatment very rarely does much for these little guys but that your friendly neighborhood podiatrist can fix you up with very little fuss. First the home treatment. Ice your heels (cool your jets, etc) right after running. Apply ice for ten minutes, take it off for ten, then repeat. This will help take down some of the swelling and ease the pain. Try wearing heel pads when you run, too. You can buy commercial heel pads at the drugstore, or simply use makeup sponges or any piece of sponge rubber, about 1/2-inch thick. These will absorb shock and shift your weight somewhat away from the front of the heel where your heel spurs are. Arch supports (also found in many drugstores) may help, too. Try wearing an arch strapping to give your arch further support. While there is a chance that doing these things will make your problem go away, don't count on it, it hardly ever happens. If your pain continues, and certainly if it increases, go to see an orthopedist or a podiatrist who will likely fit you with orthotics which should take care of the problem, which is essentially a problem of weight distribution. The doctor may, however, recommend surgery to remove the spur, though you will probably still have to wear orthotics anyway.

Condition	Description	Likely Causes	Remedy
Flat feet	There are a variety of symptoms for flat feet, and not everyone will experience all of them. Symptoms might include tired, sore feet (particularly on the bottom); lower back pain; pain in the arch; or tired legs. Your feet probably feel better when you roll your feet toward the outside. To confirm whether you have flat feet, press on the arch at the highest point. If you have weak foot, you will find this fairly painful. Another test is simply to look at your feet. When standing, you pronate; your weight falls toward the inside of your foot, and your arch almost disappears entirely.	You may have simply born with a very low arch (just because you are born with low arches, by the way, does not necessarily mean that you will ever have the symptoms of "flat feet"). On the other hand, your arches may have fallen. This happens when the flexible bands that form your arch -- the fascia -- become overstretched. This is usually the result of an imbalance in your foot. Your arch loses its flexibility and no longer springs back.	You need to give your arch some extra support. Wear an arch strapping until the pain is gone, probably about two weeks. You should also wear an arch support, both in your running shoes and your regular shoes. You can probably buy these supports in your local drugstore, and you should continue to wear them even after the pain goes away. If you do not, you run a serious risk of inviting back the pain. If these steps do not solve the problem, see a podiatrist to find out if orthotics might be necessary.
Pain in the bottom and back of heel (Apophycitis of the heel)	This injury happens to runners under twenty, most commonly to children around eleven. The pain dances up the back of your heel, and if you grab the heel and squeeze, you'll be howling in pain.	Right through the teens, the heel bone is in two pieces which eventually fuse after adolescence. If you are under twenty and you have been running very long distances, you may have jarred and separated these bones.	Try a heel strapping, using 1-1/2 inch adhesive tape. It's easy to do: Put one piece around the bottom of the heel toward the front, then another around the back of the heel toward the top -- from the inner ankle bone to the outer ankle bone. Then put another piece at the bottom, just behind the first piece of tape and overlapping by 1/2 inch. Do the same with another piece of tape at the back of the heel. Continue to add pieces of tape alternating between the bottom and the back of the heel until the last tape around the back of the heel borders the sole of your foot. Also be sure to wear heel pads -- try inserting makeup sponges in your running shoes. Be patient: the injury will probably take about six months to heal, and during this period you should avoid all running and jumping. It's tough medicine, but to do otherwise will risk making the injury worse.
Ankle injuries	Twists, Sprains and Breaks	There's no missing it when this happens. You're running along, you step in hole, and -- bam! -- your foot turns sideways, pain flames through your ankle and lower leg. The pain may not be too extreme at first, but if the twist is serious enough, swelling follows and probably a few bruises, too.	Stop running immediately after the twist. You should take this seriously, even if the pain seems pretty mild. Too many runners do a little obligatory limping then start running again only a minute or two after twisting an ankle. It's a big mistake, and it will make the pain and swelling a lot worse if you have sprained or broken the ankle. What might have been a mild sprain can become a chronic one if you try to run through it. When you get home, elevate your foot by putting it up on a chair and then ice your ankle. This is the prescription for the next 24 hours: keep the foot up and ice constantly, ten minutes on, ten minutes off. When you go to bed, prop your foot up with a pillow or two. The next day, if there is little or no swelling, it was probably only a mild twist. No worries. But if the ankle is swollen and painful, you have either a fracture or some torn ligaments (a sprain). See a doctor right away. If it's a break the doctor will put your ankle in a walking boot or a hard cast, but if it's a sprain you may get away with only a taped ankle or a soft cast. The idea here is to limit your ankle's range of motion to help healing. Do not run until all pain and swelling have disappeared.

## Lower Leg Pain

While every lower-leg injury has its specific biomechanical causes, all are rooted in tight calf muscles and relative weakness in the front leg muscles. What's going on is that your tight calves are pulling up on your heel, which in turn pulls the front of your foot down. This puts strain on the muscles in the front of your leg, which unfortunately are not strong enough to resist the pulling. Ouch.

This is very, very common in runners, since running tends to exercise the calf muscles more than those in the front. As a result, you may experience one or many of the injuries listed in this section. But fear not, a little rest and a lot of stretching and strengthening will fix you up and possibly make you a better runner, too.

Condition	Description	Likely Causes	Remedy
Anterior shin splints	Pain in the front and outer edge of your legs. If the strain continues, it is possible that micro-fractures may form in your tibia; these are stress fractures. There won't be a sudden break, just a gradual increase in pain until it becomes quite severe. If you have extreme shin pain, see a doctor for an x-ray. If you have only mild pain, it's probably shin splints (but if the pain does not respond to remedies after a few days, go to see a doctor; it may be a stress fracture after all).	While the root cause of shin splints are tight calf muscles and weak shin muscles, the injury may have been further aggravated by a variety of factors. Running on hard surfaces can put an added strain on your front leg muscles. You may have a foot that tilts in (pronates) or out (supinates) when you run, causing your front leg muscles to work harder to achieve foot stability. Or you may have developed flat feet, which you should treat separately. <b>Most likely, however, is that you're simply running too much.</b> Shin splints are very common among beginning runners, whose enthusiasm for their new sport has over-stepped the limits of their legs. Take a look at your running program; you may be doing too much too soon.	If you have a stress fracture, you should stop running immediately and see a doctor. Your injury will likely keep you off the roads for about six weeks, and depending on the severity of the stress fracture you may need a cast. Don't screw around with this, it's a serious injury. For shin splints, there are a number of steps you can take to speed recovery. First, to reduce the pain, ice your lower legs after you run. Use a commercial freeze-pack that you can wrap around your leg (or just put a wet towel in the freezer before you go out for a run). Keep the ice wrap on for ten to fifteen minutes, keeping your foot elevated. To help reduce the inflammation further, take aspirin or ibuprofen with food. Never take it on an empty stomach of before running. In the evening or at bedtime wrap a heating pad around your leg and put it on a low setting. Cut back on your running. If you can stand it, you might consider taking a few days off altogether. The important thing is not to run through the pain. You'll only make it worse. With all that extra downtime, you'll have plenty of opportunity to stretch your calves and strengthen your anterior leg muscles. Do wall pushups, and be particularly careful not to overstretch; ease into your stretches gradually. Do these several times a day, and especially before and after you run. To strengthen your front leg muscles, try the foot press and the furniture lift. You might have the wrong shoes. Check your feet to see if you might need more stability and/or cushioning. Also, try inserting heel lifts so that your calves don't have to stretch as far. You can buy these at your local drugstore, or use makeup sponges as a substitute. Finally, check to make sure you have good running form. In particular, be sure that you aren't leaning forward too much. If you slouch forward when you run, you may be pulling too hard on your calf muscles. If you try these suggestions, and your pain persists, see an orthopedist about the possibility of a stress fracture. If that's the problem, you may need orthotics to correct a foot imbalance. In general, though, keep in mind that shin splints, like many injuries, are basically an overuse injury. Listen to your body and back off when you begin to feel pain.

Condition	Description	Likely Causes	Remedy
Posterior shin splints	Pain on the inner side of your leg, right where the calf muscle meets the big shin bone. If the pain is severe, you may have strained this area enough to cause a stress fracture in the tibia. If this is the case you should see a doctor immediately.	You've strained a muscle that gives some support to the arch of your foot (the muscle runs from the shin bone around the ankle and attaches behind the ball of the foot). You probably have flat feet.	To ease the pain and reduce inflammation, ice your shins immediately after running. Use either a store-bought cold pack or simply freeze a wet towel before going out on a run. Whatever you use, wrap the ice pack around your leg and keep it on for 10 or 15 minutes, keeping your foot elevated all the while. Take aspirin or ibuprofen at mealtime to help reduce inflammation further. Definitely cut back on your mileage, maybe take a few days off from running. Whatever you do, <b>do not try to run through the pain</b> . You will only make your injury worse and could wind up with a stress fracture. Work on stretching your calf muscles. Do wall pushups several times a day, particularly before and after running, but be careful not to overdo it. Overstretching the calf can only do more damage. Ease into the stretch slowly and go only to the point where you begin to feel the muscle resist the stretch. There should never be discomfort. Also, follow the remedy for flat feet to give your arch a little extra support and ease the burden of your strained shin muscle. In particular, try wearing an arch strapping and a commercial arch support. If your pain persists, see an osteopath to find out if you might have a stress fracture.
Achilles Tendinitis	Pain in the lower calf along the Achilles tendon, the cord connecting the heel to the calf muscle. The injury is actually the swelling of the sheath within which the cord slides. When it becomes swollen, it creates too tight a fit for the tendon, and friction -- and pain -- are the results. To confirm that you have Achilles tendinitis, pinch the tendon starting close to the heel and working your way up toward the calf. If you feel some serious pain and maybe some swelling in response to the pinching, you've got Achilles tendinitis.	Your tendon is being pulled, and because tendons don't much like to stretch, you feel a lot of pain. There are two reasons it might be getting stretched. First, your calf muscle might be too short. Second, your heel might be too far from the calf muscle.	Reduce the pain and swelling by icing the area immediately after running. You can use either a store-bought cold pack or a frozen wet towel. Ice for 10 or 15 minutes. To reduce inflammation, take an aspirin or ibuprofen at mealtime. At other times (before bed, for example), soak the sore tendon in hot water. Lifting your heel up toward your calf will relieve the pull on your tendon. Try a heel insert in your regular shoes as well as your running shoes. You can purchase heel lifts in the foot section of many drugstores, or try using a makeup sponge as a substitute. You'll probably notice an immediate difference. Most important, though, you'll have to stop running for a few days. Give your tendon as long as it needs for the pain to go away. If you continue to run through the injury, you risk tearing the tendon, and then you're looking at real pain. The time you should take off will range anywhere from a few days to two weeks. And don't stretch during this period, either. Your tendon has already been yanked around too much, and stretching, at least at first, will hurt more than help. When you begin running again, pay special attention to stretching your calves with wall pushups and your hamstrings with the hamstring stretch (these stretches, incidentally, are the key modes of preventive maintenance for avoiding Achilles tendinitis in the future). Avoid running on soft surfaces which might let your heel sink in too much (e.g., sand). Ice your tendon after every run and put a heating pad (at a low setting) on the area in the evening and at bedtime. Incidentally, hill work is particularly aggravating to your injury. Cut way back on hills until the injury has healed, and then return to hill work only gradually.
Pain in the mid-calf	Dull aching pain in the middle of your calf. If the pain is low and near the heel, you may have Achilles tendinitis instead.	The soleus muscle, which runs between the two heads of the big calf muscle, often takes more of a beating than the larger muscle because it acts first when you use your calf muscles. This injury is an overuse injury, plain and simple, and one that may have been aggravated by too much hill work.	To help the pain, ice the area immediately after running. You can use either a store-bought cold pack or a frozen wet towel. Ice for 10 or 15 minutes. To reduce inflammation, take an aspirin or ibuprofen at mealtime. Stretching is the main prescription here. Do the wall pushups several times a day and especially before and after running. Also, try putting some heel lifts in your regular shoes as well as your running shoes. Back off on your mileage for a few days, and don't try to run through the pain. Give your legs a little time to mend.

## Knee Pain

Non-runners seem to obsess about the knees of runners. Go figure, but there seems to be a fixation with the idea that we are literally running our knees into the ground with every step we take. Turns out that knee injuries are not inevitable and, though common, are easily corrected if properly managed. Knee pain need not deter you from your ideal running program.

Condition	Description	Likely Causes	Remedy
<p>Runner's knee (Chondromalacia of the patella)</p>	<p>Pain around and sometimes behind the kneecap. One of the most common injuries among runners, runner's knee most often strikes as runners approach forty miles per week for the first time. Even after taking a couple of days off, the pain seems to come right back, sometimes even intensifying, after the first few miles of your next run. The pain often feels worst when running downhill or walking down stairs, and the knee is often stiff and sore after sitting down for long periods. You might hear a crunching or clicking sound when you bend or extend your knee. The sure-fire test for runner's knee: sit down and put your leg out on a chair so that it's stretched out straight. Have a friend squeeze your leg just above the knee while pushing on the kneecap. She should push from the outside of the leg toward the center. At the same time, tighten your thigh muscle. If this is painful, you're looking at runner's knee.</p>	<p>It's actually not your knee's fault at all. Blame your feet and thighs; for one reason or another they aren't doing their jobs properly. Your knee moves up and down in a narrow little groove in your thigh bone. It's a nifty design: when your legs and feet are working efficiently, your knee moves smoothly and comfortably with every step. But trouble appears when your kneecap moves out of its track, or rubs up against its sides. That trouble becomes pain when you factor in nearly 1000 steps per cartilage-grinding mile. Over time the cushioning cartilage around the knee becomes worn. That smarts. And that's runner's knee. How did your knee get off track? Probably because of relatively weak thigh muscles and a lack of foot support. It's your thigh muscles that hold your kneecap in place, preventing it from trying to jump its track. Running tends to develop the back thigh muscles (hamstrings) more than those in the front (the quadriceps), and the imbalance is sometimes enough to allow the kneecap to pull and twist to the side. Your foot, meanwhile, may not be giving you the stability you need. It's likely that your feet are making a wrong movement every time they hit the ground, and you're feeling the constant pounding and repetition of this mistake in your knee. Maybe you're overpronating (rolling your foot in) or supinating (turning it out too much) when you run. Runner's knee is further aggravated by simple overuse. If you have steeply increased your mileage recently, you might consider holding back a bit. Likewise with recent new hill work or speed work. Runner's knee can also be brought on by running on banked surfaces or a curved track. Running on a road that is banked at the sides, for example, effectively gives you one short leg, causing it to pronate and put pressure on the knee. Try as much as possible to run on a level surface, or at the very least give each leg equal time as "the short leg."</p>	<p>This is an easily treatable injury with a little patience. First, relieve the pain by icing your knees immediately after running. You can use commercially available cold packs or simply put a wet towel in the freezer before you run. Wrap the cold packs around each knee for about fifteen minutes to bring down the swelling. Take an anti-inflammatory like ibuprofen or aspirin after running, too, but only with food and never before running. Before bed, put heating pads or warm wet towels on your knees for half an hour. Stabilize your feet. Make sure you have the right kind of shoes for your foot type. Consider buying a commercially made foot support in the footcare section of your drug store. If, in combination with thigh-strengthening exercises, the foot supports are not enough to get rid of the injury, see a podiatrist about whether you might need orthotics. Finally, strengthen your thighs with a few quadricep exercises.</p>

Condition	Description	Likely Causes	Remedy
Iliotibial Band Syndrome	Pain on the outside of your knee. It is usually not accompanied by swelling or locking. The pain may be sporadic and disappear with rest, only to reoccur suddenly, often at the same point in a run. Depending on the individual, this could happen at four miles, two miles, or just 200 yards. The pain often goes away almost immediately after you stop running.	<b>This is an overuse injury.</b> The iliotibial band is a band of tissue that begins at the outside of the pelvis and extends to the outside part of the knee. The band helps stabilize the knee. If it becomes too short, the band rubs too tightly on the bone of your leg and becomes irritated. The tightness is usually the result of too much strain from overtraining.	Patience. This one takes a while. Give yourself plenty of rest, reduce your miles and ice frequently. You can keep running, but cut your run short as soon as you begin to feel any pain. Cut way back on hill work, and be sure to run on even surfaces. Look into some deep friction massage with a physical therapist. Try some leg-raise exercises to strengthen your hips and be conscientious about the iliotibial band stretch. You might supplement that stretch with this one, doing it gently but often: To stretch the IT band of your right leg, stand with your left side facing the wall. Cross your right leg behind your left, while putting your left hand against the wall. Put your weight on the right leg and lean against the wall by pushing your right hip away from the wall. Be sure that your right foot is parallel to the wall during the stretch. You should be able to feel the stretch in your hip and down the IT band (in this case, along the right side of your right leg). Hold for five seconds and do this ten times. For the left leg, do as above, but stand with your right side facing the wall, and put your left leg behind your right.
Baker's cyst	Pain and swelling behind the knee, right at the junction where the upper leg meets the lower leg. It probably feels like a little glob of Jello under your skin.	It's a non-malignant growth that typically hits runners and tennis players.	See an orthopedist to have it removed.

## Upper Leg Pain

Condition	Description	Likely Causes	Remedy
Groin Pull	Pain in the upper inner thigh muscle.	Plain and simple, <b>this is an overuse injury.</b> The pain is your adductor muscle calling attention to itself, complaining that it's been held too tense. The adductor is the muscle that runs along the inner thigh and is involved in turning in your toes, a natural motion when running. It's possible that you got this injury when running on a <b>slippery surface</b> ; it's a natural instinct to tense your adductors to keep balance, but it can result in a groin pull. Or, you may have overstretched. For others, it could be a foot imbalance. If there's not enough range of motion in your ankle, the adductor tends to tighten to help you keep your balance.	This injury takes patience and more than a little dedication to overcome. It's not what you want to hear, but you'll have to stop running -- or at least cut back drastically -- for about a week. <b>After the pain has gone away</b> , and not before, gently stretch the area with the groin stretch, and try the inside leg raise for a strengthening exercise. Do these stretches, they'll get you back on the road. After seven days of stretching, try a little easy running, starting with just a mile. Keep doing the exercises, and gradually build your mileage. If the pain keeps up, take a few more days off. At the same time, try putting a wedge in your shoes, at the inner side of the heel. If you don't have enough range of motion in your ankles, as mentioned above, a wedge will help your ankles and heels turn out with less strain on your adductors. Try cutting a wedge out of foam rubber (like a makeup sponge), about 1/2" thick at the widest part. If the pain persists after these treatments, consult a podiatrist on whether orthotics may be needed. Add balance exercises to your routine.

Condition	Description	Likely Causes	Remedy
Hamstring Pull or Tear	<p>Pain in the back of the thigh. You probably have trouble running at your usual pace and find that it's much more comfortable to take short quick strides than your usual longer ones. Be aware that many runners confuse a hamstring pull with sciatica, which occurs when a nerve running from your back down your legs is pinched. It's important to know what you have, since treatment for a hamstring pull can sometimes aggravate sciatica. If the pain is centered in the back of the thigh, it's probably a hamstring pull, while sciatica is usually painful at the outer side of the thigh and often in the hip and lower back, sometimes all the way down to your feet. With a hamstring pull, you have difficulty extending your leg without pain. Try this test: lie on your back and try to raise one leg, knee straight (if it's a hamstring pull, you probably won't be able to get this far). Have someone flex your foot, bending your toe toward your knee. If you have sciatica, this will be very painful, something akin to a burning electric shock down your leg or in the small of your back. Finally, feel the back of your thigh and look for a lump. If you find one, possibly accompanied by a bruise, it's a hamstring pull.</p>	<p>Your hamstring is the muscle that goes from your buttock to the back of your knee. You've injured it either by overextending it or by extending it too quickly too many times. Sprinting or running downhill, especially at speeds you are not accustomed to, are likely causes. Also, consider whether you have been running on a banked surface. On roads that slope at the sides, for example, you effectively have one long leg and one short leg. The short leg has to extend further in order to keep up with the longer one, and you may overdo it, tearing your hamstring.</p>	<p>For immediate relief, ice your hamstring right after running. You may either use a commercially available cold pack or simply put a wet towel in the freezer before you go out for your run. Wrap the pack around your leg for fifteen minutes. Also, take an anti-inflammatory like ibuprofen or aspirin with meals, but never before running, to bring down the swelling.</p> <p>The good news is that you can keep running. In fact, it's part of your treatment to help gradually stretch and extend your hamstring. Just take it easy, using short steps that don't require you to extend your legs too much. If you've been running on a banked track or road and you have a hamstring pull in your "short leg," try reversing directions so that your other leg has the chance to be the short leg. Better yet, try to find a flat surface to run on.</p> <p>Finally, when doing your stretching, pay particular attention to the hamstring stretch. Be gentle, though, and don't force the muscle to stretch farther than it is willing; there should never be any discomfort when you stretch.</p> <p>If you have a simple cramp in your hamstring, this treatment should take care of it in about three days. If it's a pull, the pain should be much relieved after seven to ten days of this regimen. If, however, the pain has eased very little, if at all, go to see an osteopath.</p>

Condition	Description	Likely Causes	Remedy
<p>Quadricep Pull or Tear</p>	<p>Pain in the front of the thigh. A severe tear (sudden pain without warning), may be accompanied by swelling or bruises.</p>	<p>This injury is almost certainly due to a strength imbalance between your quadricep and your hamstring (the muscle at the back of your thigh). Basically, your hamstring overpowered your quadricep and caused it to tear. This muscle imbalance is not uncommon among runners, since running tends to work out the hamstrings much more than the quadriceps.</p>	<p>For immediate relief, ice the muscle right after running. You may either use a commercially available cold pack or simply put a wet towel in the freezer before you go out for your run. Wrap the pack around your leg for fifteen minutes. Also, take an anti-inflammatory like ibuprofen or aspirin with meals, but never before running, to bring down the swelling. After applying the ice, wrap your thigh in an ACE bandage to keep it compressed.</p> <p>You can continue running, but take it very easy, and pay careful attention to stretching your quadriceps. Do it gently, but thoroughly. See exercises six and, in particular, seven on Kick!'s stretching page. Don't force the stretch; there should never be any discomfort when you're stretching. With gentle running and stretching, you can probably be back to normal in two or three weeks.</p> <p>The way to prevent this injury in the future is to strengthen your quadriceps. As your legs continue to improve, you might consider doing some biking and leg lifts to help strengthen your quadriceps.</p>

## Hip and Back Pain

The following conditions are often interrelated, and there's often a nasty domino effect of injuries. For example, tense lower-back muscles can contribute to piriformis syndrome which in turn can cause inflammation of the sciatic nerve. Not only can this be a painful experience, but it makes it rather difficult to track down the source. Often, these injuries in the hip or buttock tend to cascade from lower-back strain or injury. Wherever it hurts, look over the material here on lower back pain for some possible causes of your particular injury.

Keep in mind that back pain can be an indicator of a serious problem (though not necessarily). As always, keep in mind that the material in this section cannot replace the advice of your own medical doctor. If you are in severe pain, make an appointment.

Condition	Description	Likely Causes	Remedy
Low back pain		<p>Every time your feet hit the ground, the shock is transferred up your legs to your hips and spine, and any biomechanical irregularity or imbalance can ultimately cause lower back pain. It could be that you have flat feet, and your over-pronation is causing a back ache. It could be that one of your legs is shorter than the other, or that your pelvis is slightly uneven. You could have a curve in your spine. More seriously, one of the discs between the vertebrae of your spine could be degenerating. Back pain can be a tough mystery to solve, but with a doctor's help you should be able to track down the cause. While muscle strain is the most common cause of back pain for runners, play it safe and visit an orthopedist, an osteopath, or perhaps a chiropractor to have your spine and vertebrae examined if you are experiencing severe pain.</p> <p>If you have ruled out sciatica, you may have an uneven pelvis or unequal leg lengths. These conditions are relatively common; ask your doctor to examine whether one of them is the case for you. With either, the muscles on one side are being pulled. They're tense to begin with, and the added pounding of running can put them into spasm.</p> <p>Relatively weak abdominal and lower back muscles might also contribute to the problem. Running generally tends to cause strength imbalances between these muscle groups.</p> <p>Or the root cause may be in your foot. Back pain is one of the many possible injuries associated with flat feet and over-pronation (i.e., your foot tends to roll inward too much when you run). Likewise, if your second toe is longer than the big toe (a condition known as Morton's Toe), this could cause a weight imbalance resulting in back pain.</p>	<p>For immediate relief, cut back on the mileage and try some damp heat: hot baths or the steam room. Heating pads and heat rubs may help somewhat, but wet heat seems to work better than dry.</p> <p>As for fixing the root cause of your pain, it's a matter of figuring out which of the many possible factors is ultimately responsible.</p> <p>If the problem is disc deterioration, surgery may be necessary, and an adjustment in training is absolutely required. Take this condition seriously, and see a doctor.</p> <p>If your spine is merely out of alignment, manipulation by a chiropractor may help ease your pain. This may also ease your muscle strain.</p> <p>If your doctor confirms that you have an uneven pelvis or unequal leg lengths, the solution will likely be to try to correct the problem with a heel lift on the short side. This may be as simple as putting a piece of 1/2" foam rubber into your running shoe; a makeup sponge would probably be just right. If you don't get any relief at all within a week, go ahead and take the sponge out. If it does no good, it's better just not to wear one; your body may have adjusted to different leg lengths, and "fixing" it may cause more discomfort. Whatever the case, make sure that the remedy matches the problem; do not use a heel lift if your doctor does not confirm that you have an uneven pelvis or unequal leg lengths, or you may only make your problems worse.</p> <p>If your problem is in the structure of your foot, your solution may be as simple as wearing different running shoes. The folks at your local running store can make recommendations for motion-control shoes that will remedy over-pronation. If your severely over-pronate, if you have flat feet, or if you have Morton's Toe, orthotics may be necessary, and you should see a podiatrist for a recommendation.</p> <p>In most cases of lower back pain, you will benefit from exercises to strengthen your back and abdominal muscles.</p>

Condition	Description	Likely Causes	Remedy
Sciatica	The sciatic nerve is the longest nerve in your body, stretching from the end of your spine all the way down to your feet. When it gets pinched, it could cause pain anywhere along its length. You might feel pain in your lower back on one side, in the lower buttock, or down one leg, possibly all the way down to the foot. It is common for sciatica to be confused with a hamstring pull, and it is important to determine which you have, since stretching the hamstring muscle can further aggravate sciatica. Try this test: lie on your back with the painful leg up, knee straight. Have a friend flex your foot, bending it down toward your knee. If you have sciatica, this will be very painful, marked by a burning sensation or a feeling of electric shock down your leg or in your upper back.	Your sciatic nerve is pinched. It could be caused by a pelvic tilt or by pressure on a disc, a cushion that separates your vertebrae. For a variety of reasons (a muscle spasm for instance, or more seriously, a degenerated disc), one disc may stick out so that it's not centered between the vertebrae.	You can't do much for this on your own, though it will help to keep good posture and avoid slumping (strengthening your abdominal muscles with bent-knee situps can help with this). Stop running and see a doctor. While whatever is causing the sciatica may be relatively harmless (tense or spasming muscles), it could also be a degenerated disc, which requires serious medical attention. In the meantime, take anti-inflammatories and try hot baths or the steam room. Sciatica is something that can hang around for months or may just flare up and disappear. It's not uncommon for it to come back, but it may be years before it does so.
Hip & buttock pain (Piriformis syndrome)	Pain in your upper leg, buttocks, hips, or lower back -- all radiating from the piriform muscle, deep in the buttock. The back section of the buttock on the outside may be sensitive to the touch.	The piriform is the muscle that helps your hip to rotate. Tightness in the back or hamstring can make the piriform's work difficult and cause inflammation. This swelling in turn often causes pressure and inflammation on the sciatic nerve as well (see sciatica, below). Prolonged sitting can aggravate the injury, as can a tight lower back.	Icing and anti-inflammatories will help with the pain and swelling. Vigorous massage of the knot in the muscle will help it to relax and ease the pain. Meanwhile, work on strengthening and stretching your hip, hamstring and lower-back muscles. For stretching, focus on the hamstring stretch, the hip & lower-back stretch, and the hamstring & back stretch. For strengthening, try side leg lifts.
Pain at the side of the hip	Pain in the side of your hip, usually at the joint of your hip and thigh but sometimes a bit higher toward the hip bone.	A basic overuse injury. You've inflamed the fascia in your hips, the flexible fibers in the joint. The specific reasons for this pain vary for different runners. The culprit may be weak back muscles, the type of surface on which you run, the shoes you wear, or the length of your running stride. One of the remedies below will likely work for you, but it's difficult to predict which it will be. However, if you have pain in only one of your hips, you probably have either an uneven pelvis or unequal leg lengths. See the section above on lower back pain for details on treating this.	As mentioned, hip pain can come about for a variety of reasons. Try these remedies; one of them (or a combination) should get rid of the pain, albeit with a bit of persistence. Try shortening your stride when you run. Try switching running surfaces (if you've been running on a hard surface, try a softer one or vice versa). Reconsider your running shoes; your feet may demand a different style or fit. Finally, try some abdominal and lower back exercises to strengthen those muscles.

## Belly and Chest Pain

Condition	Description	Likely Causes	Remedy
The Stitch	We've all had this one, a sudden sharp pain in side of the upper abdomen at the base of the ribs. It usually happens along when you're really pushing yourself and fades quickly when you slow down or stop. The stitch is particularly common for new runners still adjusting to the rigors of running.	The pain is caused by a spasm of the diaphragm, the muscle that controls your breathing. There are a number of possible reasons this is happening. If your breathing isn't controlled and disciplined, the diaphragm may be complaining. If you are running too soon after eating, your heavy stomach may literally be tugging at the ligaments connected to the diaphragm. Or you may simply be running too fast for your body's breathing machinery to keep up.	A stitch will usually go away quickly after just slowing down or stopping. If you're in a race or you just don't want to stop, however, you can often make it go away by bringing your breathing into careful control. Concentrate on belly breathing, pushing your belly out when you breathe in and relax it as you breathe out. Take deep slow breaths on the intake and exhale suddenly, even noisily. To get the diaphragm to contract in rhythm with your steps, try to inhale and exhale as you land on your left foot. Strange but true, this can help prevent spasms by encouraging the diaphragm to bounce along in sync with your stride. If the pain is just too much and you have to stop, try bending over and raising your knee on the stitch side while pressing your fingers deep into the painful area and tightening your stomach muscles. Or just walk while belly breathing.
"Runner's Trots" (loose bowels)	Painful and potentially embarrassing, the runner's trots are marked by the urge to head for the bushes mid-run. You may experience abdominal cramps, gas, diarrhea during or immediately after long or particularly strenuous runs and races	It's not entirely clear why this happens, but 20 to 40 percent of runners are troubled by this from one time to another. It's something that seems quite specific to runners and probably has something to do with the inevitable bouncing and jarring and sloshing that goes on. At the same time, running boosts the hormones that get things moving in your intestines. Dehydration, too, can contribute to the problem. Some runners, though, are more likely than others to have the trots. It's possible that this has to do with milk (lactose) intolerance. Even a mild intolerance that would otherwise go unnoticed may cause gas and diarrhea during a strenuous run within 24 hours of eating a dairy product. This is caused by the body's inability to metabolize milk and dairy products; gas in the large bowel is the result.	Be sure to drink plenty of water before, during and after your run. Experiment with reducing or cutting out all dairy products at least 24 hours before a race or long run. Try using lactose-free milk, available in most stores. Finally, try to clear your system with a bowel movement before you run.
Runner's Nipple	When you have runner's nipple, you know it. Raw, painful, even bloody nipples are tough to miss, though sometimes you won't notice it until you get into the shower only to be treated to a decidedly unpleasant stinging sensation.	Chafing with a wet shirt or running singlet. Particularly during long summer runs, the constant friction of a sweaty, salty shirt can quickly rub your nipples raw. Cotton is particularly villainous here, since it tends to hold water and become heavy.	Before especially long runs and on hot days, smear a little petroleum jelly on the nipples (or really anywhere there might be some chafing). Wear softer, looser clothes, and avoid screen-printed designs on your shirts and singlets. Especially avoid cotton and instead seek out lighter wicking fabrics like CoolMax.

## Comeback

Never mind the physical pain of the injury, the psychic pain of not being able to run can sometimes be even worse. Force yourself to tough it out. It's very important to come back slowly from an injury, and you shouldn't rush the process. Cut way back on running – or eliminate it entirely -- until you recover from your injury.

Your body, unfortunately, is a fickle creature. After all the time and energy and miles you have invested to get it into shape, your body will thank you by forgetting it all at the earliest opportunity. It's a difficult truth: you lose fitness quickly when you stop all training. *You can, however, take up to a week off without losing any ground. Three or four days of rest can even improve your performance.* But after a week, you will quickly start to lose your edge -- a lot faster than it took you to build it up. You can lose about half your aerobic fitness in just two or three weeks.

## Cross Training

This "detraining" effect can be minimized or even eliminated with cross-training. Find an activity that will not put added strain on your injury and keep at it to maintain fitness. Biking and swimming are good aerobic exercises to get you off your feet but keep you in shape. You will still lose some fitness, since these activities don't work your main running muscles nearly to the degree that running would. Water running --strapping on a flotation belt and running in place in water -- is perhaps the best cross-training activity for maintaining running ability during a comeback.

## Rule of Thumb

After a long layoff, even with cross training, you're bound to lose at least some fitness. A general rule of thumb is that it takes about two weeks of "retraining" to come back from every week in which you do no exercise. Go easy on yourself during this period. Don't let your ego convince you that you should immediately try to run as you did before your injury. You risk bringing the injury right back. If you've been off the roads for only a week or two, start at about half the distance you were running before the injury. You should be able to build back to your former level in two to four weeks.

If you have had an extended layoff, however, you should be very conservative. Treat yourself like a new runner. Alternate running and walking in your workouts and take a day off after every running day. Never fear, you'll find that you will get back into the groove faster than it took you to get into it when you first started. But don't push it. Your heart and lungs probably won't have much trouble keeping up, but it may surprise you how tired your muscles and bones feel. Don't strain or injure them in your rush to return to your previous fitness.

This does not necessarily mean running slower -- just less. Turns out that jogging slowly might actually aggravate your injury; better to run a normal pace and throw in walking breaks for the same amount that you run. As you progress, of course, you can extend the amount of time that you run and reduce the walking time. For your weekly mileage, think in terms of plateaus. As you build back to your previous level, pause for a few weeks at intermediate mileage levels along the way to regain strength and confidence. If you were running 30 miles before your injury, stop at 15 miles per week to get comfortable with that amount, then build up to 20 or 25 miles and establish a strong base there before heading on to 30 miles per week.

## Ego and Expectations

Just remember to keep that ego in check. Adjust your goals and expectations so that you don't get frustrated and injure yourself again. Think of your time off as an opportunity to explore other exercise activities. Enjoy your rest; it's actually good for you.

Original source: [kicksports.com](http://kicksports.com) which is a defunct website now